



environmental service

by Papineau, R.E.A. 791

APR 25 2001

April 20, 2001

Mr. Don Hwang  
County of Alameda  
Health Care Services Agency  
Environmental Protection Division  
1131 Harbor Bay Parkway Suite 250  
Alameda, CA 94502

**Subject: 1723 Fruitvale Avenue Oakland, California (the "Property")  
(Project 2000-033.02)**

Dear Mr. Hwang:

Jack Sumski, Jr., and I have received your letter dated April 3, 2001, and agree to proceed with quarterly monitoring of the three wells, with sampling of the downgradient well only. At this time, we wish to proceed also with a discussion and interpretation of the available data.

#### **Data**

Concentrations of perchloroethylene (PCE) in the soil samples collected in November 2000 are low part-per-billion (ppb) concentrations, 9.8 to 43  $\mu\text{g}/\text{kg}$  (ppb) at location SB-5. Concentrations of PCE in soil at SB-5 increase with increasing depth, to a maximum concentration of 43  $\mu\text{g}/\text{kg}$  in the smear zone. The smear zone refers to soil at, or just above, 20.5 feet below grade surface (bgs), which may seasonally be saturated with ground water. Concentrations of PCE in all soil samples collected in January 2001 were less than the detection limit of 25  $\mu\text{g}/\text{kg}$  (ppb). Concentrations daughter chemicals, TCE and cis 1,2-DCE, by-products of the reductive dechlorination of PCE, were not detected in the soil samples collected in November 2000 or January 2001.

Based upon the first quarter 2001 ground water sampling, concentrations of PCE in ground water samples collected from the three wells were 140 to 160  $\mu\text{g}/\text{L}$  (ppb). Concentrations of daughter chemicals, TCE and cis 1,2-DCE, were not detected in any of the ground water samples. The ground water surface sloped down toward the west on February 20, 2001 (see Figure 1).

#### **Potential Interpretations**

**Surface Release Near SB-5** - The source hypothetically could have originated from a surface release of PCE, limited to the immediate area around SB-5, and aged on-site. This hypothesis is contraindicated by 1) increasing concentrations of PCE at deeper depths and 2) the absence of daughter chemicals. The soil on the Property is shown in the geologic cross-sections to consist of silt or clayey silt (ML) and silty clay or sandy clay (SC) to a depth of approximately 16 feet bgs. These upper soils are capped by a concrete floor slab and would be expected to have the highest concentrations of PCE, if PCE had been released from a surface spill.



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**Subsurface Release Near SB-5** - The source hypothetically could have originated from a sub-slab release of PCE, limited to the immediate area around SB-5, and aged on site. This hypothesis is contraindicated by 1) available analytical results for soil samples collected adjacent to sub-slab features and 2) the absence of daughter chemicals. Waste oil was stored in drums. Sub-slab features include the former hydraulic hoist, now removed, and a floor drain. The floor drain, toilet and sink in the former office area probably are connected to a common sanitary sewer lateral pipe (see Figure 1).

PCE is not a component of hydraulic oil or gasoline. Furthermore, if PCE had been released from the former lift, higher concentrations than 43  $\mu\text{g}/\text{kg}$  would have been found during the remedial excavation and in soil samples collected at SB-5. If PCE has been released from the floor drain, then detectable concentrations would have been found in soil samples collected at SB-3 (see Figure 1).

**Upgradient Release East of SB-5 or Off-Site** - The source of PCE could be upgradient, that is, east of SB-5, or even off site. At the concentrations measured in soil at location SB-5, the detectable PCE concentrations in soil near SB-5 could be caused by volatilization of PCE dissolved in the ground water. With PCE's vapor pressure (14 mm), PCE would rather evaporate into the air than remain in the ground water. Concentrations of PCE (140 to 160  $\mu\text{g}/\text{L}$ ) in the ground water could generate concentrations near the detection limit of 25  $\mu\text{g}/\text{kg}$  in soil by volatilization. Volatilization would be preferentially greater in any area of porous soil above the smear zone. Because the soil near the former hydraulic lift has been disturbed, it probably has relatively more pore volume for accumulation of PCE vapors.

### Conclusion

An upgradient release of PCE east of SB-5, or off-site, is the only interpretation of the three listed above that is consistent with all available data. The owner is not aware of any release of PCE from the Property. The owner acquired the Property in 1993 and has no actual knowledge of any past storage or use of PCE on the Property. In December 1999 a Phase II investigation report was prepared at the discretion of the owner prior to a contemplated sale of the Property. In July 2000 a Phase III remediation report was prepared to document work overseen by the city of Oakland, including 1) removal of one (1) hydraulic hoist and 2) remedial excavation of presumed PCE-affected soil. Remedial excavation would not have been performed had the PCE concentration been accurately reported in December 1999. In March 2001 a Specified Soil and Ground Water Sampling report was prepared at the request of the Alameda County Health Care Services Agency.

Based upon the available data in the above-mentioned reports, there has been no discovery of an unauthorized release of a petroleum hydrocarbon or PCE from the Property which could warrant a clean-up response. Gasoline and BTEX concentrations in the ground water sample collected at SB-1 were reported by the analytical laboratory to be 270  $\mu\text{g}/\text{L}$  as gasoline (with "no recognizable fuel pattern"); less than 0.5  $\mu\text{g}/\text{L}$  as benzene, ethyl benzene and toluene; and 0.51  $\mu\text{g}/\text{L}$  as xylenes. Detectable concentrations of PCE were not found in soil samples collected at locations SS-1, SB-1, SB-2, SB-3, SB-7/MW-1, SB-8, SB-10/MWP-2, or SB-11/MWP-3 (see Figure 1). Where detectable, PCE concentrations in soil were reported as 24  $\mu\text{g}/\text{kg}$  at 5-10 feet bgs at location SB-4, 34  $\mu\text{g}/\text{kg}$  at 11 feet bgs at location SS-2, and 43  $\mu\text{g}/\text{kg}$  at 20-20.5 feet bgs at location SB-5. At location SB-5, PCE concentrations were higher near the ground water and decreased near the concrete floor at the surface. There were no detectable concentrations of PCE, TCE, or cis 1,2-DCE reported in the soil



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sample collected at location SB-3, adjacent to the floor drain, or in the soil samples collected from locations outside the building in the vicinity of the former underground gasoline storage tank and dispenser pump.

Therefore, in view of the absence of actual or constructive knowledge of PCE use on the Property, the owner reserves the right to install an upgradient monitoring well, at his discretion, before or after the conclusion of four quarters of monitoring the existing on-site monitoring wells, should this be necessary to prove an off-site source of release. In the interim, agreement to perform quarterly monitoring should not be construed as the owner's acknowledgment of an unauthorized release at 1723 Fruitvale Avenue.

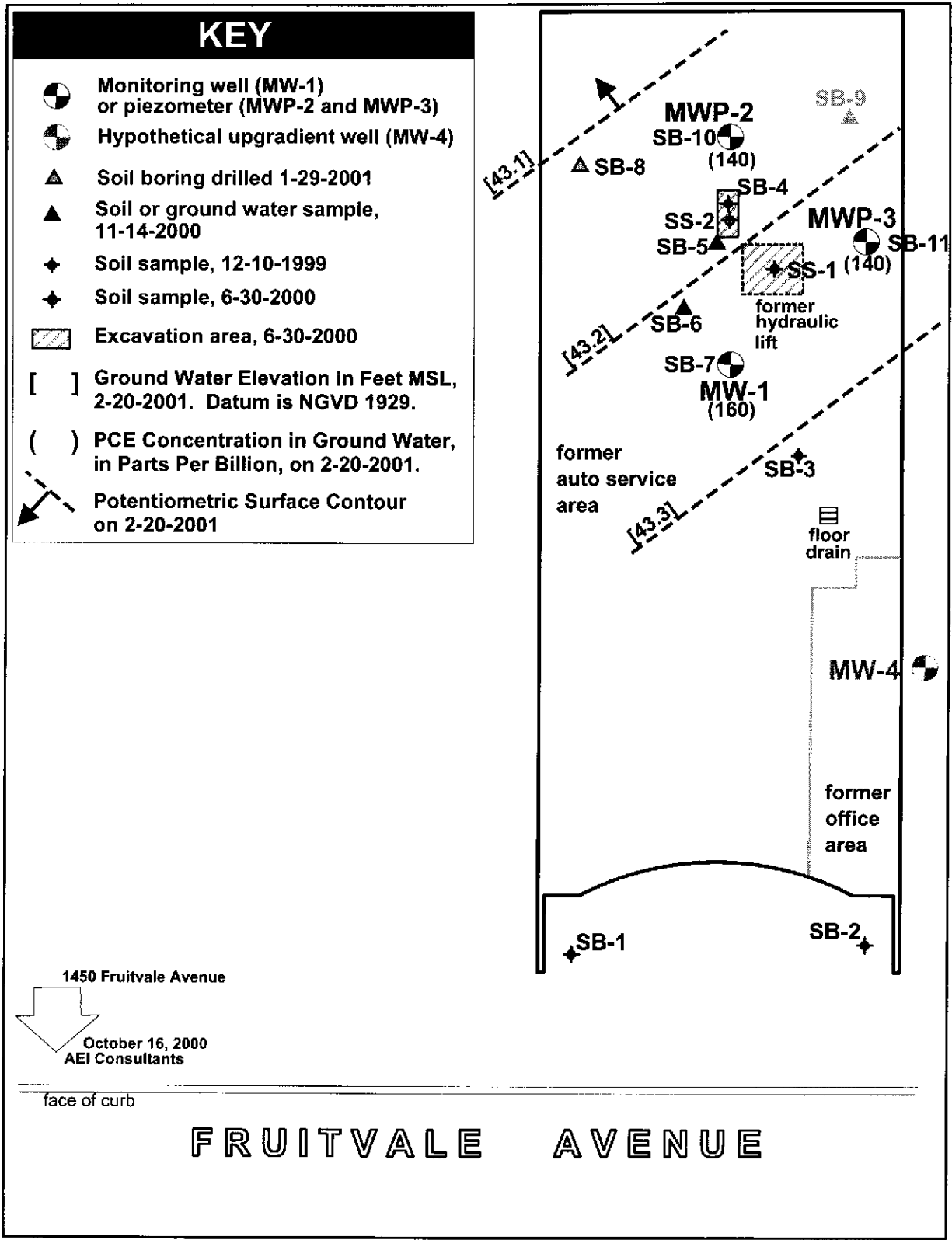
Please call Marc Papineau at (510) 881-8574 if you have any questions about the report dated March 5, 2001, or this letter.

Sincerely,

Marc Papineau  
California Registered Environmental Assessor 791

enclosure: Figure 1 (Page 4 of 4), *corrected to U.S.G.S. NGVD (1929) from City of Oakland Datum*

cc. Mr. Jack Sumski, Jr.  
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environmental service  
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5.0 ft  
 10.0 ft

**Figure 1**  
 Hypothetical Upgradient Well MW-4  
 1723 Fruitvale Avenue  
 Oakland, California